

Appl. No.: 10/808,128
Amdt. Dated: 08/06/2004
Off. Act. Dated: 05/08/2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): In a hybrid electric vehicle having an internal combustion engine, an electric motor, and a battery system and controller for powering the electric motor, the improvement comprising:

providing a transmission between said electric motor and a set of wheels in said vehicle; and

controlling the interaction between the internal combustion engine, and the electric motor and the transmission by taking to regenerate energy into the battery system only if it is more fuel efficient than throttling the engine and operating the engine at a lower efficiency engine fuel efficiency during regeneration and during subsequent power production from the electric motor is greater than engine fuel efficiency resulting from throttling the engine to reduce engine/motor power.

2. (canceled)

3. (currently amended): A method for controlling the interaction between power output of an internal combustion engine and electric motor operated by a battery system and controller in a hybrid electric vehicle, comprising:

providing a transmission between said electric motor and a set of wheels in said vehicle; and

taking controlling interaction between the internal combustion engine, the electric motor and the transmission to regenerate energy into the battery system only if it is more fuel efficient than throttling the engine and operating the engine at a lower

Appl. No.: 10/606,128
Amdt. Dated: 08/06/2004
Off. Act. Dated: 05/06/2004

efficiency engine fuel efficiency during regeneration and during subsequent power production from the electric motor is greater than engine fuel efficiency resulting from throttling the engine to reduce engine/motor power.

4. (canceled)

5. (currently amended): An apparatus for controlling the ~~interaction between power output of~~ an internal combustion engine and electric motor operated by a battery system ~~and controller~~ in a hybrid electric vehicle, comprising:

a computer; and

programming associated with said computer for ~~taking~~ controlling interaction between the internal combustion engine, the electric motor and a transmission between the electric motor and a set of wheels in the vehicle to regenerate energy into the battery system only if it is more fuel efficient than throttling the engine and operating the engine at a lower efficiency engine fuel efficiency during regeneration and during subsequent power production from the electric motor is greater than engine fuel efficiency resulting from throttling the engine to reduce engine/motor power.

Claims 6-24 (canceled)

25. (new): An improvement as recited in claim 1, wherein said transmission comprises a multispeed transmission.

26. (new): An improvement as recited in claim 1, wherein said transmission comprises a continuously variable transmission.

27. (new): A method as recited in claim 3, wherein said transmission comprises a multispeed transmission.

Appl. No.: 10/606,128
Amdt. Dated: 08/08/2004
Off. Act. Dated: 05/06/2004

28. (new): A method as recited in claim 3, wherein said transmission comprises a continuously variable transmission.

29. (new): An apparatus as recited in claim 5, wherein said transmission comprises a multispeed transmission.

30. (new): An apparatus as recited in claim 5, wherein said transmission comprises a continuously variable transmission.